

REMARKS/ARGUMENTS

Claims 1-12 and 48-50 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner has objected to the term "decreased" contained in independent claims 1, 10 and 19. Applicant has amended independent claims 1, 10 and 19 in a manner which is believed to render the rejection moot.

With respect to claims 49-50 which were also rejected under 35 U.S.C. §112, second paragraph, the Examiner has taken the position that the claims include no positive process steps. However, the Examiner's attention is directed to both claims 49 and 50 which each call for the act of "using" and therefore meet the requirements of a method claim. Withdrawal of the rejection is respectfully requested.

Claims 1-25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai (4,673,696) in view of Kurth et al. (2002/0121328). Applicant maintains that the Examiner has failed to establish a prima facie case of obviousness and respectfully requests withdrawal of the rejection for the following reasons.

Tsai was directed to solving a problem related to RIM technology which requires levels of short chain diols to be such that the solubility level of the short chain diols in the long chain polyols is exceeded. Such combinations lack storage and phase stability. See Tsai, column 4, lines 3-7; column 2, lines 63-66. Tsai solved the problem by the inclusion of a compatibilizing ethylenically unsaturated esterol. See column 1, lines 66-68. Applicant's claimed invention would not have been obvious in view of Tsai or the other references of record.

Kurth et al. was focused on a problem associated with the use of vegetable oil as a polyol to produce a urethane product including the inability to regulate the functionality of the

polyol resulting in variations in urethane product where the industry demands relatively strict specifications be met. See paragraph [0011]. Kurth et al. solved the problem by using a two-stage transesterification process involving the reaction product of a multifunctional alcohol and a multifunctional component in subsequent reaction with the vegetable oil. The resulting modified polyol has an increased functionality. As such Kurth et al. actually adds OH (hydroxyl) groups to the vegetable oil polyol. Such hydroxyl groups add polarity to the polyol and thus hydrophilicity to the polyol.

A person of ordinary skill in the art would not be motivated to substitute the biopolymer of Kurth et al in the composition of Tsai because there would be no expectation of success in creating a blend that is storage stable. Tsai recognizes that the combining of various polyols can result in a blend which is not stable for storage. Therefore, a person of ordinary skill would not be motivated to make the proposed combination or substitutions set forth in the rejection.

Furthermore, neither Tsai nor Kurth et al suggest a polyol component including a hydrophobic biopolymer polyol and a second polyol, wherein the biopolymer polyol is present in an amount up to 40 wt% of the total polyol component and the biopolymer being present in an amount less than the second polyol component as set forth in independent claims 1 and 19. Neither Tsai nor Kurth et al discloses or suggests a polyol component including a hydrophobic biopolymer polyol and a second polyol wherein the biopolymer polyol is present in an amount up to 40% of the total polyol component and wherein the biopolymer is present in an amount less than the second polyol component, and wherein the polyol component comprises at least one of "an alkylene glycol, glycoether, glycerine, trimethylolpropane, tertiary amine-containing polyol, triisopropanolamine, polyether polyol or polyester polyol."

Claims 1-25, 48-50 were rejected under 35 U.S.C. §103(a) as being obvious over Lekovic et al (6,803,390) and (6,699,916) each taken alone, or in view of Kurth et al. However,

none of the references relied on in the rejection suggest as set forth in independent claims 1 and 19 wherein the polyol component includes a second polyol and wherein the biopolymer is present in an amount up to 40 wt% of the total polyol component and the biopolymer being present in an amount less than the second polyol. Furthermore, none of the references relied on in the rejection suggest a method wherein the second polyol is one of the specific polyols set forth in independent claim 10. Withdrawal of the rejection is respectfully requested.

Furthermore, applicant maintains that Kurth et al., at best, teaches away from applicant's claims by suggesting that biopolymers may be utilized to make flexible foams suitable for use as carpet backings. Applicant's independent claims are directed to either methods or products including a rigid polyurethane foam.

Claims 1-25 were rejected on the ground of non-statutory obvious-type double patenting as being unpatentable over the claims 1-22 of U.S. Patent No. 6,803,390 and claims 1-19 of U.S. Patent No. 6,699,916 each taken alone or in view of Kurth et al. The claims of the Lekovic et al. patents do not suggest the use of biopolymers nor do they suggest that the biopolymer should be hydrophobic. Although Kurth et al. discloses the use of biopolymer polyols, there is no suggestion in Kurth et al. that hydrophobic polyols should be selected. Nor is there any suggestion that when such hydrophobic biopolymer polyols are used in applicant's claimed method that the resulting product would be a rigid polyurethane foam having decreased water absorption properties.

Furthermore, the claims of Lekovic et al '390 or '961, taken alone or in view of Kurth et al do not suggest the polyol component set forth in Applicant's amended independent claims 1, 10 and 19. Withdrawal of the rejection is respectfully requested.

The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 689-3500 if any unresolved matters remain.

Any needed extension of time is hereby requested with the filing of this document.

The Commissioner is authorized to charge fee for the newly added claims 51-54, if entered, and any additional fees or credit any overpayment to Deposit Account No. 04-1512 (Dow Global Technologies Inc.). A duplicate copy of this letter is enclosed herewith.

Respectfully submitted,


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Dated: September 4, 2007